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Williams Mullen 222 Central Park Ave Suite 1700 Virginia Beach, VA 23462			EXAMINER CHOJNACKI, MELLISSA M	
			ART UNIT	PAPER NUMBER
			2164	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

09/845,571

**Applicant(s)**

SCHABES ET AL.

**Examiner**

MELLISSA M. CHOJNACKI

**Art Unit**

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 47-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 47-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Remarks

1. In response to communications filed on August 12, 2010, no claims have been amended, claims 47, and 54-60 have been cancelled and no new claims have been added. Therefore, claims 47-60 are presently pending in this application.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 47-60 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al. (U.S. Patent No. 6,665,666).

As to claim 47, Brown et al., teaches a method of providing an answer to a user supplied natural language question based on stored information on a computer-readable medium (See abstract; column 1, lines 22-27), comprising:  
receiving a user supplied natural language question via a computer user interface in which the user supplied natural language question includes a question word (See column 1, lines 58-67; column 2, lines 1-67);

generating an analyzed question comprised of syntactic and morphological categories derived from the user supplied natural language question (See column 3, lines 48-67; column 4, lines 1-14; column 5, lines 7-10; column 11, lines 61-65);

determining which question pattern from a table of predetermined questions patterns corresponds to the analyzed question by matching the order and type of syntactic and morphological categories derived from the user supplied natural language question to syntactic and morphological categories of the predetermined question patterns wherein the table of predetermined question patterns is comprised of a set of phrases that have been derived through transformations to have a different structure but the same informational content as a specific declarative sentence or an appropriate question word substituted in the phrase (See column 1, lines 37-57; column 3, lines 56-66, where "predetermined question patterns" is read on "templates"; column 5, lines 11-67; column 6, lines 1-5, where "matching" the users query is disclosed to "question patterns" (question templates); column 14, lines 3-48);

replacing the question word with at least one partially unspecified term that is conceptually related to the question word and the answer (See column 1, lines 37-57; column 5, lines 11-67; column 13, lines 32-43, wherein the words are replaced with "partially unspecified statements" (QA-Tokens); column 14, lines 3-48);

transforming the question pattern into an affirmative statement pattern that is parallel in structure to an answer to the user supplied natural language

Art Unit: 2164

question and includes: (i) syntactic and morphological categories (See column 1, lines 37-57; column 14, lines 3-48); and (ii) the at least one partially unspecified term (See column 1, lines 37-57; column 5, lines 11-67; column 13, lines 32-43, wherein the words are replaced with "partially unspecified statements" (QA-Tokens); column 14, lines 3-48);

generating a partially unspecified query based on the affirmative statement pattern, the partially unspecified query containing the at least one partially unspecified term (See column 1, lines 37-57; column 5, lines 11-67; column 13, lines 32-43, wherein the words are replaced with "partially unspecified statements" (QA-Tokens); column 14, lines 3-48); and

determining at least one answer to the user supplied natural language question by matching the partially unspecified query to the stored information wherein the at least one partially unspecified term is further matched to a specific term in the stored information (See abstract; column 3, lines 38-67; column 4, lines 1-13).

As to claims 48, and 55, Brown et al., teaches transforming matched question patterns into one or more partially unspecified statements using syntactic frames (See Brown et al., column 1, lines 37-57; column 14, lines 3-48).

As to claims 49, and 56, Brown et al. teaches wherein the stored information comprises a set of documents and an index identifying which documents within the set of documents contain terms or groups of terms

Art Unit: 2164

answering the partially unspecified queries (See Brown et al., abstract; column 1, lines 38-52; column 4, lines 50-53; column 5, lines 33-35, lines 50-57).

As to claims 50, and 57, Brown et al., teaches collecting answers from matching the partially unspecified query across a plurality of documents in the stored information (See Brown et al., abstract; column 3, lines 48-60).

As to claims 51, and 58, Brown et al. teaches ranking the at least one answers according to their frequency of matching (See Brown et al., column 9, lines 4-10; column 13, lines 11-17).

As to claims 52, and 59, Brown et al. teaches wherein transforming the question pattern into an affirmative statement pattern further comprises replacing a generic syntactic or morphological category with one or more corresponding elements from the user supplied natural language question (See Brown et al., abstract; column 1, lines 37-57; column 14, lines 3-48).

As to claims 53, and 60, Brown et al., teaches wherein a first of the partially unspecified statements is transformed into more than one partially unspecified queries in accordance with a mapping of a question word to more than one corresponding partially unspecified term (See Brown et al., column 3, lines 48-60; column 4, lines 1-13; column 9, lines 38-40).

As to claim 54, Brown et al. teaches a computer readable medium storing a computer program product for providing an answer to a user supplied natural language question based on stored information (See abstract; column 1, lines 22-27), comprising:

computer program code for receiving a user supplied natural language question via a computer user interface in which the user supplied natural language question includes a question word (See column 1, lines 58-67; column 2, lines 1-67);

computer program code for generating an analyzed question comprised of syntactic and morphological categories derived from the user supplied natural language question (See column 3, lines 48-67; column 4, lines 1-14; column 5, lines 7-10; column 11, lines 61-65);

computer program code for determining which question pattern from a table of predetermined questions patterns corresponds to the analyzed question by matching the order and type of syntactic and morphological categories derived from the user supplied natural language question to the order and type of syntactic and morphological categories of the predetermined question patterns (See column 1, lines 37-57; column 3, lines 56-66, where "predetermined question patterns" is read on "templates"; column 5, lines 11-67; column 6, lines 1-5, where "matching" the users query is disclosed to "question patterns" (question templates); column 14, lines 3-48);

computer program code for replacing the question word with at least one partially unspecified term that is conceptually related to the question word and

Art Unit: 2164

the answer (See column 1, lines 37-57; column 5, lines 11-67; column 13, lines 32-43, wherein the words are replaced with "partially unspecified statements" (QA-Tokens); column 14, lines 3-48);

computer program code for transforming the question pattern into an affirmative statement pattern that includes: : (i) syntactic and morphological categories (See column 1, lines 37-57; column 14, lines 3-48); and (ii) the at least one partially unspecified term (See column 1, lines 37-57; column 5, lines 11-67; column 13, lines 32-43, wherein the words are replaced with "partially unspecified statements" (QA-Tokens); column 14, lines 3-48);

computer program code for generating a partially unspecified query based on the affirmative statement pattern, the partially unspecified query containing the at least one partially unspecified term (See column 1, lines 37-57; column 5, lines 11-67; column 13, lines 32-43, wherein the words are replaced with "partially unspecified statements" (QA-Tokens); column 14, lines 3-48); and

computer program code for determining at least one answer to the user supplied natural language question by matching the partially unspecified query to the stored information wherein the at least one partially unspecified term is further matched to a specific term in the stored information (See abstract; column 3, lines 38-67; column 4, lines 1-13).



**Response to Arguments**

4. Applicant's arguments filed on 12-August -2010, with respect to the rejected claims 47-60 have been fully considered but they are not found to be persuasive:

In response to applicants' arguments regarding the indicated allowable subject matter, the arguments and amendments have been fully considered but are not found to be persuasive, because the amendments have not distinguished the present claim language from the prior art of record. The examiner and the examiners SPE still believe the claim language does not differentiate and still reads on the Brown reference.

In response to applicants' arguments regarding ***"Brown does not teach parsing the question (query) into a series of syntactic or morphological categories in order to derive a likely statement pattern for the answer. The data representing a QA-token may arguably be characterized as a syntactic category but the remainder of the query is not parsed into a "series" of syntactic categories. Nor does Brown generate an analyzed question comprised of the syntactic categories of the parsed question,"*** the arguments have been fully considered but are not found to be persuasive, because first the claim language does not state "series" of syntactic categories" or parsing the query. Furthermore, Brown teaches query analysis and matches it to question templates and then replaces it with QA-Tokens (See column 1, lines 37-57; column 3, lines 56-66; column 14, lines 3-48). Also, Brown discloses Brown discloses parsing the query into syntactic and morphological categories

Art Unit: 2164

(See column 10, lines 1-25; column 11, lines 60-67; column 12, lines 1-38), where Brown discloses parsing the question into four parts one of which being synonyms, canonical forms etc., which is what the syntactic categories are within the specification of the present application (See paragraph 0039).

In response to applicants' arguments regarding "***Brown simply does not perform the steps claimed in the present application of: generating an analyzed question comprised of syntactic and morphological categories derived from the user supplied natural language question; determining which question pattern from a table of predetermined questions patterns corresponds to the analyzed question by matching the order and type of syntactic and morphological categories derived from the user supplied natural language question to the order and type of syntactic and morphological categories of the predetermined question patterns wherein the table of predetermined question patterns is comprised of a set of phrases that have been derived through transformations to have a different structure but the same informational content as a specific declarative sentence or an appropriate question word substituted in the phrase; replacing the question word with at least one partially unspecified term that is conceptually related to the question word and the answer; transforming the question pattern into an affirmative statement pattern that is parallel in structure to an answer to the user supplied natural language question and includes: (i) syntactic and morphological categories; and (ii) the at least one partially unspecified term; or generating a partially unspecified query***"

Art Unit: 2164

***based on the affirmative statement pattern, the partially unspecified query containing the at least one partially unspecified term,***" the arguments have been fully considered but are not found to be persuasive, because because Brown '666 discloses "pattern file" (question patterns), which consist of "question templates" (unspecified statements) and replacing it with the associated set of QA-tokens (Predetermined transformations) (See column 3, lines 48-66). Furthermore, Brown discloses parsing the query into syntactic categories (See column 10, lines 1-25; column 11, lines 60-67; column 12, lines 1-38), where Brown discloses parsing the question into four parts one of which being synonyms, canonical forms etc. and transforming the question patterns into "question templates" (unspecified statements) in order to find the answer (See abstract; column 3, lines 48-66; column 10, lines 1-25; column 11, lines 60-67; column 12, lines 1-38). Also, page 5 ,lines 27-29; page 6, lines 1-24 of the present invention specification do not differentiate the "answers" found by the present invention to be any different or unable to read upon Browns "hit-list". According to Brown the "hit-list" contains the "best matches" as does the present invention.

In response to applicants' arguments regarding "***the results or output of Brown is a hit-list of documents while the claimed output of the present application is an answer to the question,***" the arguments have been fully considered but are not found to be persuasive, because the claim language states "determining at least one answer", indicating that more then one answer is not an unreasonable interpretation. Furthermore, a "hit list" to answer a query

Art Unit: 2164

does provide an answer. Again the claim language does not indicate this is an unreasonable interpretation because the claim language does not define the answer and that it is only a single answer. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicants' arguments regarding "***Brown does not generate partially unspecified queries through identifying an appropriate predetermined question pattern and corresponding predetermined statement patterns based only on the syntactic and/or morphological characteristics of the original question and not the specific words of the question,***" the arguments have been fully considered but are not found to be persuasive, because Brown '666 discloses "pattern file" (question patterns and/or synonyms; canonical forms), which consist of "question templates" (unspecified statements) and replacing it with the associated set of QA-tokens (Predetermined transformations) (See column 3, lines 48-66).

In response to applicants' arguments regarding "***Brown does not disclose question analysis that parses, identifies, and assigns syntactic or morphological categories to portions of the question, or any use of syntactic or morphological categories in the process of creating a query. In stark contrast, the present invention generates an analyzed question that specifically identifies syntactic or morphological categories such as noun phrase (NP) and assigns the categories to portions of the question, as demonstrated in the example analyzed question,***" the arguments have been

Art Unit: 2164

fully considered but are not found to be persuasive, because the argument is considered moot because the claim language does not contain "**syntactic or morphological categories such as noun phrase (NP) and assigns the categories to portions of the question, as demonstrated in the example analyzed question**". Brown discloses "pattern file" (question patterns), which consist of "question templates" (unspecified statements) and replacing it with the associated set of QA-tokens (Predetermined transformations) (See column 3, lines 48-66). Browns predetermined QA-tokens are the predetermined question patterns.

In response to applicants' arguments regarding "**Brown does not teach or suggest identifying predetermined question patterns within the analyzed question. As discussed above, Brown discloses testing the question to see if specific words or phrases from a pattern file are located in the question. On the other hand, the predetermined question pattern of the present invention is a pattern of syntactic and morphological categories as exemplified by "WH1 NP0 V." not of the words themselves. (See ¶ [0078] - ¶ [0079] of the published application.)**", the arguments have been fully considered but are not found to be persuasive, because the claim language, as written, does not differentiate "**syntactic and morphological categories**" from the prior art. Specifically the claim language does not disclose that the "**syntactic and morphological categories**" are exemplified as "**WH1 NP0 V.**" as argued. Although the claims are interpreted in light of the specification, limitations from

Art Unit: 2164

the specification are not read into the claims. See *In re Van Geuns*, 988

F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELLISSA M. CHOJNACKI whose telephone number is (571)272-4076. The examiner can normally be reached on 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The

Art Unit: 2164

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 4, 2010

Mmc

/Charles Rones/  
Supervisory Patent Examiner, Art Unit 2164